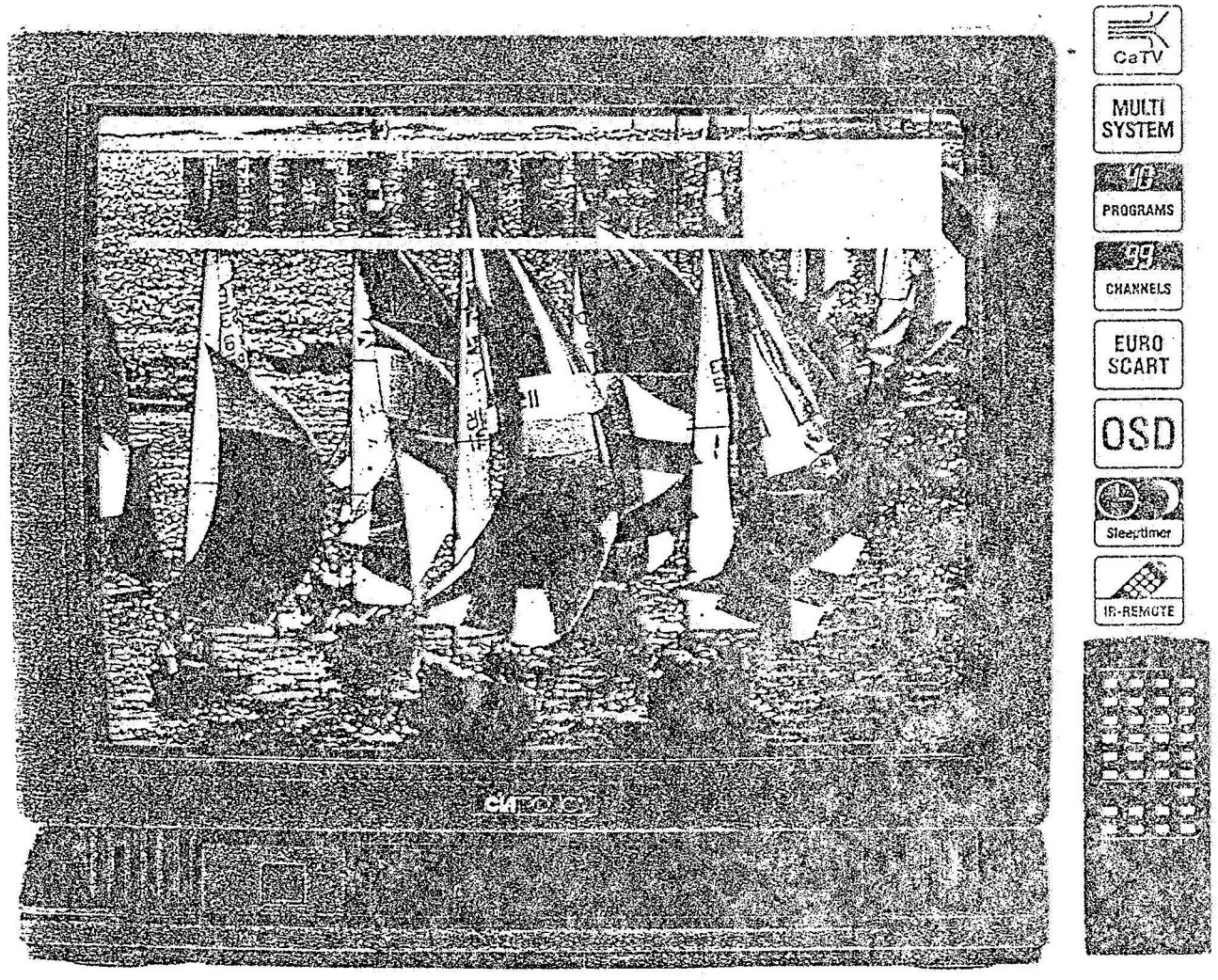
CTC CTRONIC®

CTV 258 VT



CTC Farbfernsehgerät CTV 258 VT

Service Manual

CONTENTS

X-RAY RADIATION PRECAUTION

SAFETY PRECAUTION

PRODUCT SAFETY NOTICE

SPECIFICATIONS

OPERATION CONTROLS

CONNECTIONS

MECHANICAL DISASSEMBLIES

GENERAL ADJUSTMENT INSTRUCTION

BLOCK DIAGRAM

BOTTOM AND COMPONENT VIEW OF P.C. BOARD

SCHEMATIC DIAGRAM

TUNER CIRCUIT

ELECTRICAL PARTS LIST

EXPLODED VIEW OF MAIN UNIT

MECHANICAL PART LIST FOR MAIN UNIT

EXPLODED VIEW OF REMOTE CONTROL UNIT

MECHANICAL PART LIST FOR REMOTE CONTROL UNIT

RECEIVING FREQUENCY VS. CHANNEL

CAUTION

BEFORE SERVICING THE CHASSIS, READ THE "SAFETY PRECAUTION", "X-RAY RADIATION PRECAUTION" AND PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL."

X-RAY RADIATION PRECAUTION

1. Excessive high voltage can produce potentially hazardous X-RAY RADIATION. To avoid such hazards, the high voltage must not be above the specified limit. The normal value of the high voltage of this receiver is 29 KV at zero beam current (minimum brightness) under 240V AC power source. The high voltage must not, under any circumstances, exceed 31 KV.
2. Each time a receiver requires servicing, the high voltage should be checked following the HIGH VOLTAGE CHECK procedure in this manual. It is recommended the reading of the high voltage be recorded as a part of the service record. It is important to use an accurate and reliable high voltage meter.
3. The primary source of X-RAY RADIATION in this TV receiver is the picture tube. For continued X-RAY RADIATION protection, the replacement tube must be exactly the same type tube as specified in the parts list.
4. Some parts in this receiver have special safety - related characteristics for X-RAY RADIATION protection. For continued safety, parts replacement should be undertaken only after referring to the PRODUCT SAFETY NOTICE below.

SAFETY PRECAUTION

WARNING: Service should not be attempted by anyone unfamiliar with the necessary precautions on this receiver.

The following are the necessary precautions to be observed before servicing this chassis.

1. Since the power supply circuit of this receiver is directly connected to the AC power line, an isolation transformer should be used during any dynamic service to avoid possible shock hazard.
2. Always discharge the picture tube anode to the CRT conductive coating before handling the picture tube.The picture tube is highly evacuated and if broken, glass fragments will be violently expelled. Use shatter proof goggles and keep picture tube away from the unprotected body while handling.
3. When replacing a chassis in the cabinet, always be certain that all the protective devices are put back in place, such as; non-metallic control knobs, insulating covers, shields, isolation resistor-capacitor network etc.
4. When replacing parts or circuit boards, disconnect the power cord.
5. When replacing a high wattage resistor (oxide metal film resistor) on circuit board, keep the resistor 10 mm (1/2 in.) away from circuit board.
6. Connection wires must be kept away from components with high voltage or high temperature.
7. If any fuse in this TV receiver is blown, replace it with the FUSE specified in the chassis parts list.
8. The receiver is designed to operate with 180V-240V (50Hz) AC mains.

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related charateristics. These characteristics are often passed unnoticed by a visual inspection and the X-RAY RADIATION protection afforded by them cannot necessarily be obtained by using replacement components rated for higher wattage, etc. Replacement parts which have these special safety characteristics are identified in this manual and its supplements electrical components having such features are shaded on the schematic diagram and the parts list.

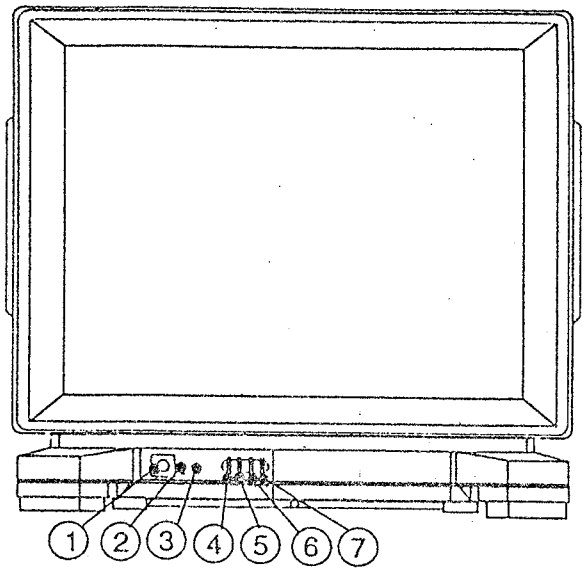
Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create shock, fire, X-RAY RADIATION or other hazards.

SPECIFICATION (FOR EUROPE)

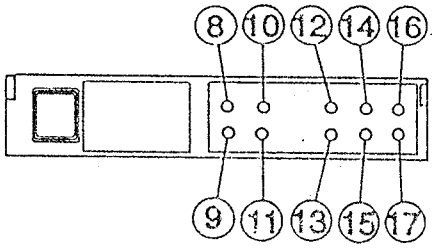
SYSTEM		:	PAL/SECAM.BG/DK SECAM L/L'	
DESTINATION		:	EUROPE	
CHANNEL COVERAGE	VHF-1	:	2-4, SS1-S2 (B). 1-5 (DK). Fb-c (L').	
	VHF-3	:	5-12, S3-20 (B). 6-12 (DK). 1-6, B-Q (L)	
	UHF	:	21-69 (G,L). 13-57 (DK)	
FREQUENCY RANGE	VHF-1	:	47 - 118	MHz
	VHF-3	:	118 - 300	MHz
	UHF	:	470-862	MHz
SCANNING	LINES	:	625	LINES
	HORIZONTAL	:	15625	Hz
	VERTICAL	:	50	Hz
IF FREQUENCY	VIDEO	:	38.9, 34.4 (L')	MHz
	SOUND	:	33.4 MHz (BG), 32.4 MHz (DK). (L), 40.45 MHz (L')	
	CHROMA	:	34.47	MHz
VISION/SOUND SEPARATION		:	5.5, 6.5	MHz
PICTURE TUBE SIZE		:	21"	
SPEAKER		:	102 x 102 mm	
OUTPUT POWER	MAXIMUM	:	3	W
AERIAL INPUT		:	75 OHm DIN JACK	
VIDEO/AUDIO		:		
INPUT/OUTPUT		:	21 PINS SCART SOCKET	
R.G.B. INPUT				
POWER CONSUMPTION		:	Watts	
POWER SOURCE		:	180 - 240	V
DIMENSIONS (W x H x D)		:	505(W) x 467 (H) x 470(D) mm	
WEIGHT		:	22 KG	

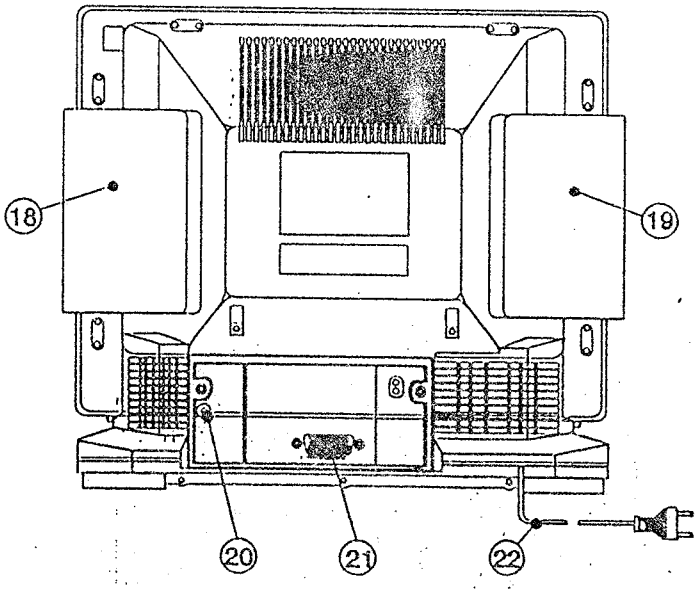
OPERATION CONTROLS

1. Mains Switch
2. Remote Sensor
3. Power Indicator
4. Program Down Button
5. Program Up Button
6. Volume Down Button
7. Volume Up Button
8. Picture Function Button (+)
9. Picture Function Button (-)
10. Picture Selector (Bright/Contrast/Colour/Volume)
11. Personal Presets (P.P.)
12. Store Button
13. Clear Button
14. Manual Tune Button (+)
15. Manual Tune Button (-)
16. Auto-Search button
17. System Button
18. Left Speaker
19. Right Speaker
20. Antenna Input Socket (75 Ohm)
21. 21 Pin Socket
22. AC Power Cord



OPEN THE PANEL DOOR





CONNECTIONS

Mains
This receiver is designed to operate on AC 180V-240V /50Hz mains supply.

Aerial
The 75 ohm coaxial cable from the VHF/UHF aerial can be directly connected to the Aerial Socket on the rear panel. The position and direction of aerial must be selected for best reception. when you use 300- cable, connect it to a 300 -75- Aerial Transformer and then the transformer into the Aerial Socket.

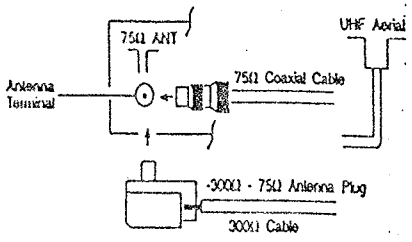
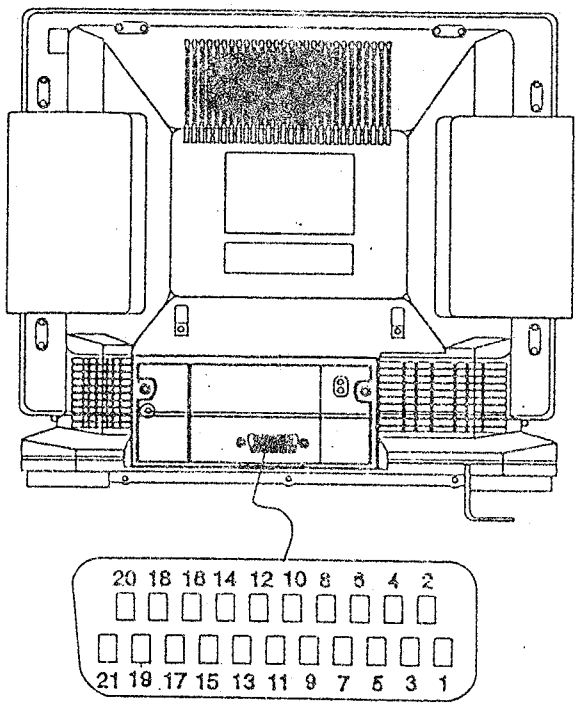


Fig.3

STANDARD CONNECTION OF PERITELEVISION FOR TV AND VIDEO SYSTEM

1. Audio Out
   Right channel "Stereo"
2. Audio In
   Right channel: Stereo"
3. Audio Out
   Left channel "Stereo"
4. Ground "Audio"
5. Ground of luminance signal "Blue"
6. Audio In
   Left channel "Stereo" or Monophonograph
7. Luminance signal input "Blue"
8. Video switching voltage
9. Ground of luminance signal "Green"
10. No Connection
11. Luminance signal input "Green"
12. No Connection
13. Ground of luminance signal "Red"
14. Ground
15. Luminance signal input "Red"
16. R.G.B. switching voltage
17. Ground "Video"
18. Ground of switching input
19. Video Out
20. Video In
21. Ground chassis



With a suitable Peritelevision plug, it can be connected to the following appliances: video-tape recorder, video camera, tape corder and audio amplifier, etc.....

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

CABINET BACK REMOVAL (See Figure 5)

1.Disconnect the antenna leads from the antenna terminals.

2.Remove the screws securing the Cabinet Back to the Cabinet Front and detach the cabinet back.

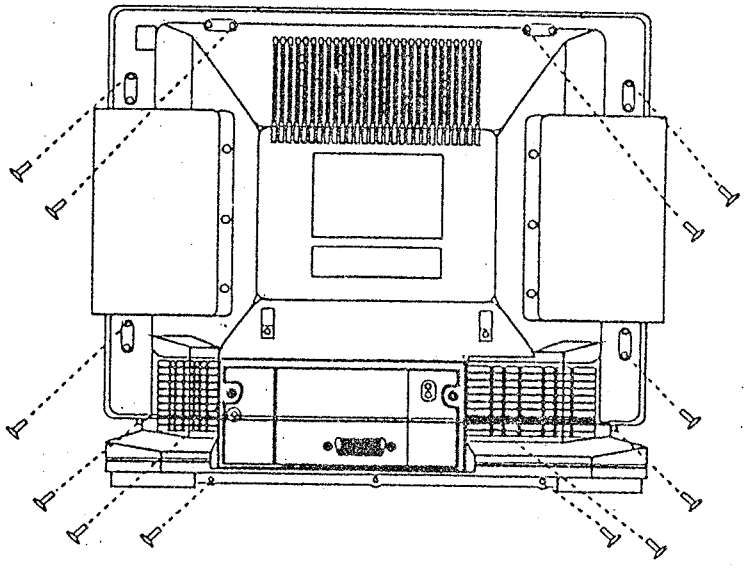


Fig.5

CHASSIS REMOVAL

Following the steps under Cabinet Back Removal, proceed as follows:-

1.Unplug the CRT grounding wire socket connected to the CRT Socket Board.

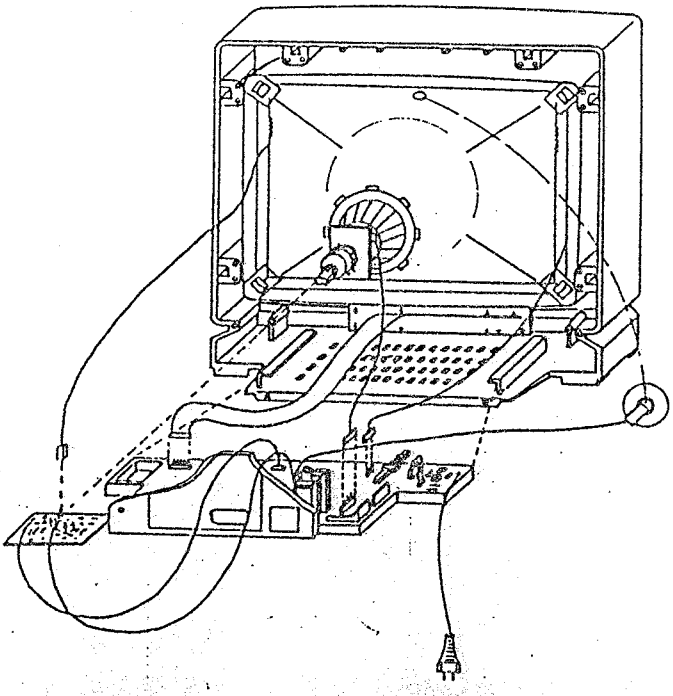
2.Detach the picture tube anode cap.

.Detach the CRT Socket (CRT Socket Board).

4.Lift up the Teletext Board first.

5.Slide out the chassis from the chassis holder.

Fig.6-7



PICTURE TUBE REMOVAL (See Figure 8)

Following the steps under CHASSIS REMOVAL proceed as follows:

1. Place the cabinet with the front down on a rolled pad or some suitable cushion placed near the top edge of the front panel.
2. Remove 4 screws securing the picture tube to the cabinet, and detach the CRT with the degaussing coil, then grasp the face plate edge of the picture tube with both hands and take out the picture tube.
3. Detach the CRT grounding wire which is attached to the picture tube lugs with spring.

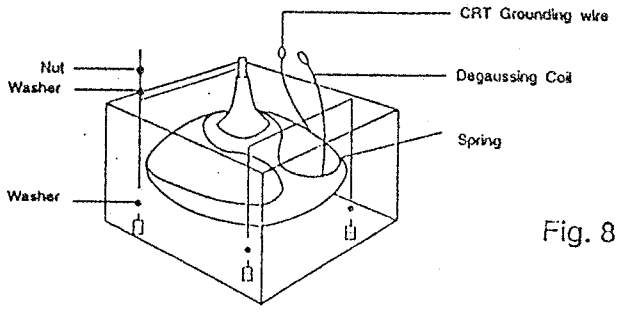


Fig. 8

GENERAL ADJUSTMENT INSTRUCTION

This receiver is transistorized and special care should be taken when servicing. Read the following matters that demand special tention before attempting adjustment.

1. Adjustment requires an exact procedure and should be undertaken only when necessary.
2. An isolation transformer should be used during any dynamic service to avoid possible shock hazard.
3. The test equipment specified or its equivalent is required to perform the alignment properly.Use of equipment which does not meet these requirements may result in improper alignment.
4. Correct matching of the equipment is esential. Failure to use proper matching will result in responses which can not represent the ture operation of the receiver.
5. The AC power line voltage should be kept 215 to 225 volts 50 Hz during alignment.
6. Do not attempt to connect or disconnect any wire while the receiver is in operation. Make sure the power cord is disconnected.before replacing parts in the receiver.
7. Unless otherwise noted, do not perform any adjustment until the receiver has been turned on for at least 10 minutes.

Note: For safety sake, the following adjustment should be conducted with the low voltage DC supply to avoid shock hazard.

A.TEST EQUIPMENT

1. AM/FM signal generator (4.5MHz - 6.5MHz).
2. Sweep/Marker signal operator (30MHz - 60MHz).
3. Sync. oscilloscope.
4. Oscilloscope (volt sensitivity over 10mV and input impedance over 1 Mohm, before 10PF).
5. Probe (Low capacitance).
6. High Impedance electronic voltmeter on VTVM (Input impedance having 100 Kohm/V at least.
7. DC power supply (Source such as a battery or a well regulated and isolated DC bias supply).
8. Demagnetizing coil
9. Pattern Generator W/Teletext signal.

B.PICTURE I.F ALIGNMENT

1. Set Sweep Generator marker to 31.9MHz, 33.4MHz, 34.4MHz, 37.9MHz, 38.9MHz, 40.4MHz.

2. Connect the signal output of Sweep/Marker Generator to the TP (Pin 7 of IC101) through 1000 PF capacitor.
3. Conect the vertical input terminal of Sync Oscilloscope in series with a 100K Ohm resistor to TP (Pin 11 of IC101).
4. Apply a +16V DC across C 330 (102) 22
5. Apply a +6V DC dummy AGC bias to TP 111 (Pin 4 of IC101).
6. Apply a +4V DC to TP 105 (Pin 2 of IC101). TP 104 6a) Short Q107 "B" to Ground
7. Adjust T103 to obtain maximum amplitude of response at 38.9 MHz as in Fig.5. (L 103)
8. Short TP110 (PIN 4 of IC 603) and TP120 (Q107'B') to ground.
9. Adjust CT101 for maximum gain of 34.4 MHz as shown in Fig.6.

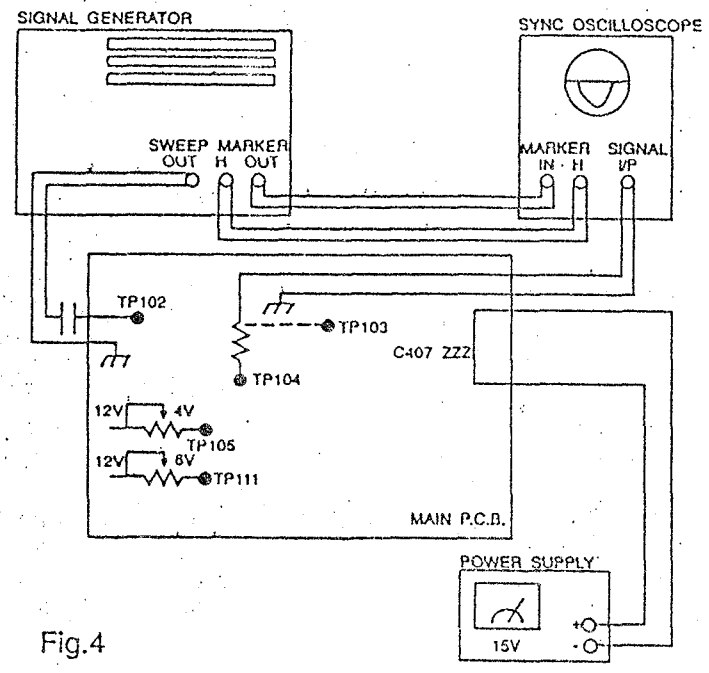
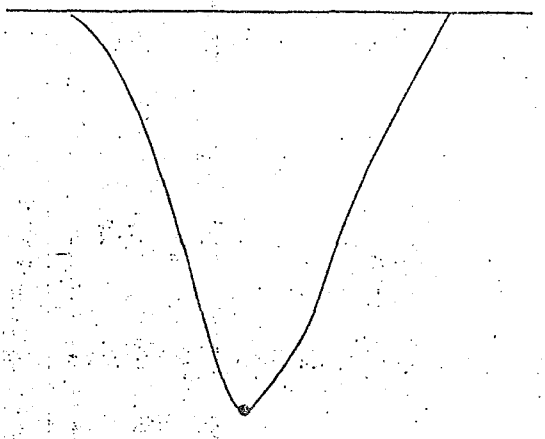
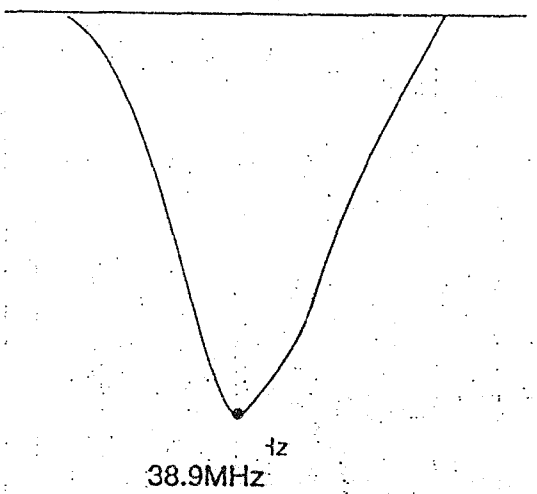


Fig.4

Fig.6

Fig. 5





C. AFC ALIGNMENT

1. Reconnect the vertical input of the Oscilloscope to TP 106 (Q103(B)) and between 1K Ohm resistor to ground.
2. Open TP120 (Q107'B') and ground.
3. Set the Oscilloscope maximum.
4. Adjust T104 for waveform as shown in Fig.7.

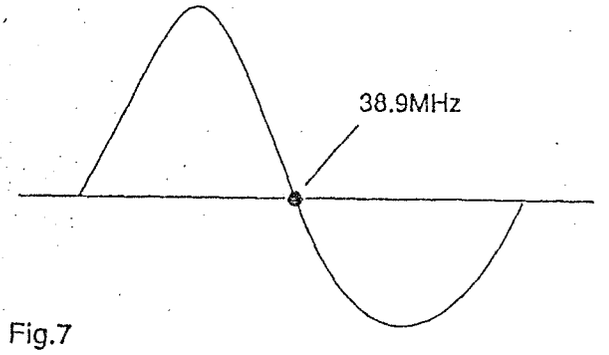


Fig.7

. SIF ALIGNMENT

1. Set FM signal generator to 5.5 MHz with AF 400 Hz, 25 KHz FM modulation output level 90-120 dB. Apply this signal to TP 107 (Pin 17 of IC102) through a 1000 PF capacitor.
2. Connect TP 113 (Pin 3 of IC102) through 10K Ohm resistor to ground.
3. Connect the Oscilloscope input in series with a 100K Ohm resistor to TP202 (Pin 9 of IC102).
4. Apply a +4V DC to TP 105 (Pin 2 of IC101).
5. Apply a +16V DC across C407.
6. Adjust T108 to obtain a maximum amplitude signal output with minimum distortion.
7. Set Signal Generator to frequency 6.5 MHz. Check the distortion.

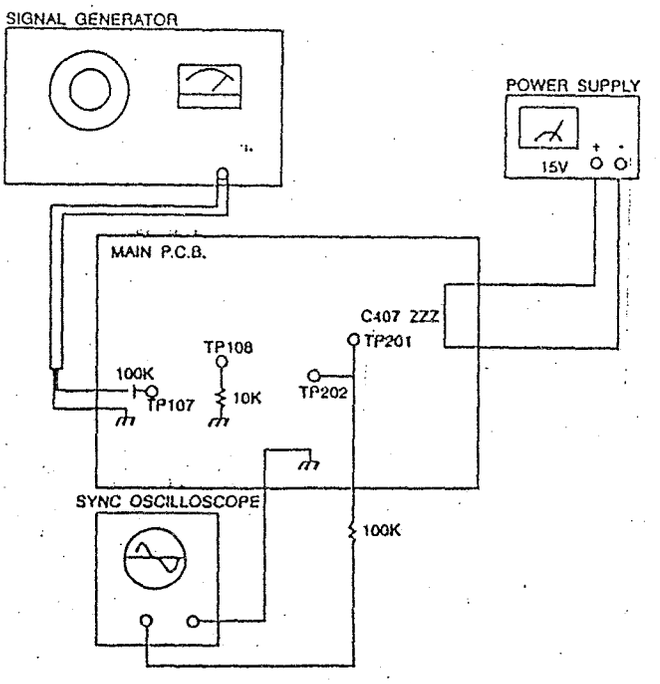


Fig.8

GENERAL ADJUSTMENT

A. AUTOMATIC DEGAUSSING

An automatic degaussing coil is attached around the picture tube, degaussing the tube properly in about one second after the set is switched on. If the receiver is moved or faced in a different direction, the power must be switched off at least 15 minutes in order that the automatic degaussing circuit operates properly. External degaussing is necessary if the automatic degaussing proves ineffective after the set is moved. External degaussing is done by moving a degaussing coil circlewise in front of the face plate and then moving it away step by step until it is about two meters from the screen, then switch off the degaussing coil. If residual colour spots are still found on the screen, adjust the color purity and convergence.

B. B+ ADJUSTMENT

CAUTION: To avoid X-ray hazards, B+ voltage must be set correctly at 110V position.

1. Make sure the AC Powers supply is 230v, 50Hz.
2. Switch on the TV Receiver, tune in an active channel and adjust brightness/contrast for maximum.
3. On Main PCB check the voltage of C324 with a reliable DC voltmeter.
4. Adjust VR601 for B+ 110V voltage reading.

. HIGH VOLTAGE CHECK

CAUTION: There is no high voltage adjustment in this chassis, B+ 150V voltage directly relates to the high voltage, it must be properly adjusted to insure the correct high voltage. The high voltage must not exceed 32KV under any conditions.

1. Connect an accurate high voltage meter to the second anode cap of picture tube.
2. Turn on the receiver, set brightness and contrast controls to minimum. (Zerobeam current)
3. Make sure the high voltage does not exceed 32V.
4. No matter whether the luminance, contrast and chrominance controls are set to maximum or minimum, the high voltage must be kept under 32KV.

D. HEIGHT ADJUSTMENT

1. Receive the Philips Pattern signal.
2. Adjust the height control (VR206) to slightly overscan the screen.

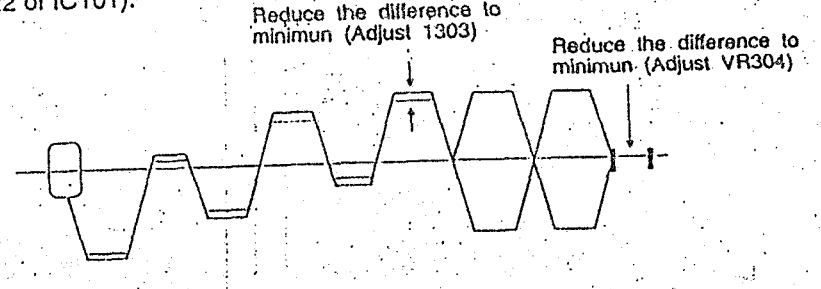
E. SOUND TRAP ADJUSTMENT

1. Receive a Pattern and set sound modulation to 5.5MHz (BG signal).
2. Connect oscilloscope to TP102 (PIN 22 of IC101).
3. Adjust L104 to minimum y signal line.
4. Set sound modulation to 6.5MHz (DK Signal).
5. Adjust L114 to minimum y signal line.

F. PAL COLOUR DEMODULATOR ADJUSTMENT

1. Receive Philips Pattern.
2. Set COLOUR control to maximum position.
3. Connect Oscilloscope to TP 305 (B-out).
4. Adjust VR304 to obtain the waveform as in Fig.10.
5. Adjust T303 to obtain the waveform as in Fig.10.
6. Connect Oscilloscope to TP 104 (Pin 22 of IC101).

FIG. 10



H. COLOUR DECODER IDENTIFIER ADJUSTMENT

1. Apply a SECAM colour bar signal (60 dB level) to the input.
2. Connect a high impedance DC voltmeter to TP 304 (PIN 23 of IC301).
3. Adjust T301 of the ident filter for maximum voltage at Pin 23 (close to 10V).

G. COLOUR DECODER BELL FILTER ADJUSTMENT

1. Apply a SECAM colour bar signal (60 dB level) to the antenna input.
2. Connect an Oscilloscope to TP 303 (Pin 18 of IC301).
3. Adjust T302 to make the envelop of colour bar signal into flat response.

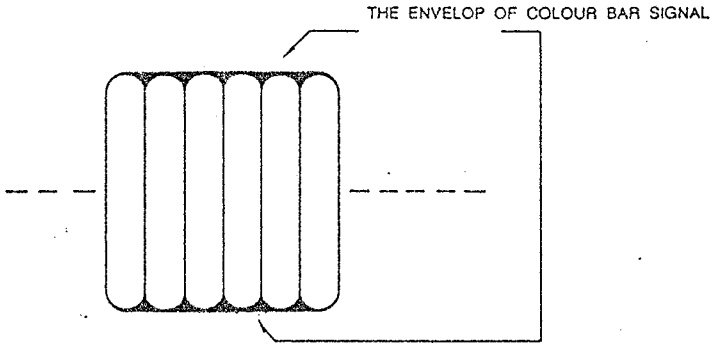


Fig.11

I. B-Y DEMODULATION ADJUSTMENT

1. Apply a SECAM colour bar signal to the input.
2. Connect an Oscilloscope to TP 301 (Pin 1 of IC201). TP 304
3. Adjust T305 to obtain a B-Y signal with correct chrominance output. L303

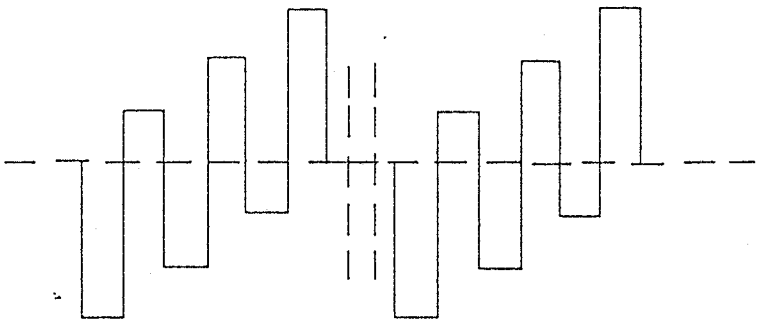


Fig.12 B-Y SIGNAL

J. R-Y DEMODULATION ADJUSTMENT

1. Apply a SECAM colour bar signal.
2. Connect an Oscilloscope to TP 302 (Pin 3 of IC201). TP 305
3. Adjust T304 to obtain an R-Y signal with correct chrominance output. L304

K. DELAY AGC ADJUSTMENT

Tune in the color bar pattern signal.
Set input signal level at 70dB.
Connect a high impedance DC voltmeter to tuner AGC terminal.
Adjust AGC control (VR101) for 7.2V ±0.2V reading.
Increase input signal level to 100dB.
Check for normal picture, sound and sync.

L. FOCUSING ADJUSTMENT

1. Receive the Philips Pattern signal.
2. Set the contrast control to the normal position.
3. Adjust focus control for a well-defined, sharpest display in the middle between centre and side edge of the screen.

M. WHITE BALANCE ADJUSTMENT

Set TV brightness control to minimum and switch to AV mode.
Set the R.G.B. cut off controls (VR503, VR504, VR505) and the G.B. drive controls (VR501, VR502) at center positions.
Rotate the screen control fully counter clockwise.
Connect TP16 to ground with a jumper wire.
Rotate the screen control gradually clockwise until the first horizontal line appears on the screen.
If the first horizontal line is in blue, adjust VR503, VR504 to increase the red and green component level to get a white horizontal line.
Remove the jumper wire and switch back to TV, set color to minimum. Adjust VR501, VR502 to maintain a good white balance at the brightest part of the screen.
Use white balance checker to fine adjust (VR503, VR504, VR505) at 25% brightness level and (VR501, VR502) at 75% brightness level.

N. SUB-BRIGHTNESS ADJUSTMENT

(a) Set TV controls to normal.
(b) Switch TV to AV.
(c) Adjust sub-brightness control (VR203) until light just appears on the screen.

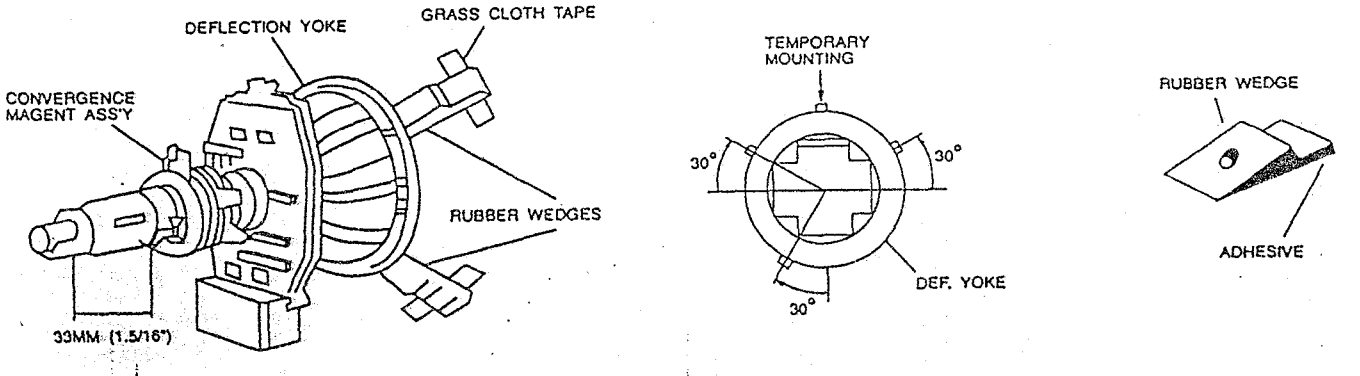
COLOR PURITY AND CONVERGENCE ADJUSTMENT

1. Color Purity Adjustment

NOTE: Before attempting any purity adjustments, the receiver should be operated for at least fifteen minutes.
(a) Demagnetize the picture tube and cabinet using a degaussing coil.
(b) Turn the contrast and brightness controls to maximum.
(c) Adjust Red and Blue controls (VR503) and (VR505); to provide only a green raster. Advance the Green Bias Control (VR504) if necessary.
(d) Loosen the clamp screw holding the yoke backward to provide vertical green belt (Zone) in the picture screen.
(e) Remove the Rubber Wedges.
(f) Rotate and spread the tabs of the purity magnet (See Fig.21) around the neck of the picture tube until the green belt is in the center of the screen. At the same time, center the raster vertically.
(g) Move the yoke slowly forward or backward until a uniform green screen is obtained. Tighten the clamp screw of the yoke temporarily.
(h) Check the purity of the red and blue raster by adjusting the bias controls.
(i) Obtain a white raster, referring to white balance adjustment.
(j) Proceed with convergence adjustment.

2. Convergence Magnet Assembly Positioning

Convergence Magnet Assembly and Rubber Wedges need mechanical positioning following Fig.21.



RUBBER WEDGES LOCATION
Fig.21

3. Center Convergence Adjustment

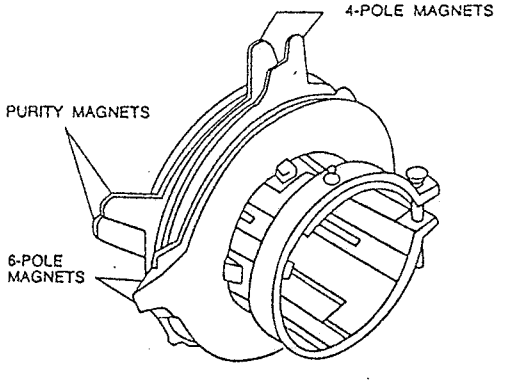
NOTE: Before attempting any convergence adjustments, the receiver should be operated for at least fifteen minutes.

(a) Receive crosshatch pattern with a color bar signal generator.
(b) Adjust the brightness and contrast controls for well defined Pattern.
(c) Adjust two tabs of the 4 Pole Magnets to change the angle between them (See Fig.22) and superimpose red and blue vertical lines in the center area of the picture screen. (See Fig.23).
(d) Turn both tabs at the same time keeping the constant angle to superimpose red and blue horizontal lines at the center of screen. (See Fig.23).
(e) Adjust two tabs of 6 Pole Magnets to superimpose red/blue line with green one. Adjusting the angle affects the vertical lines and rotating both magnets affects the horizontal lines.
(f) Repeat adjustments 3, 4, 5, keeping in mind red, green and blue movement, because 4 Pole Magnets and 6 Pole Magnets interact and make dot movement complex.

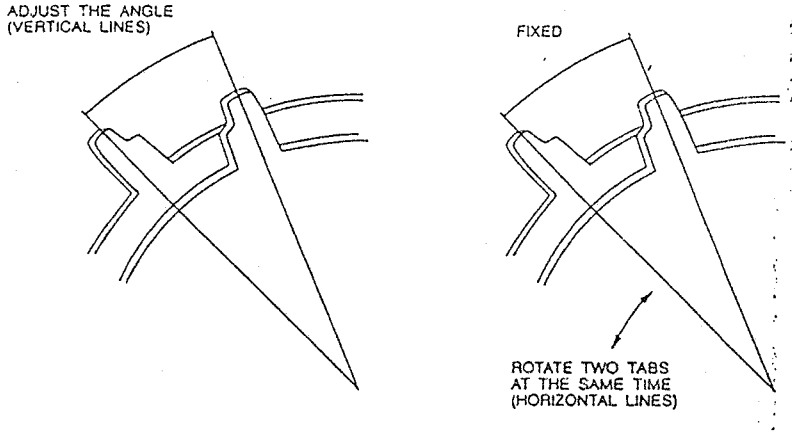
4. Circumference Convergence Adjustment

NOTE: This adjustment requires Rubber wedges and Glass Cloth Tapes.

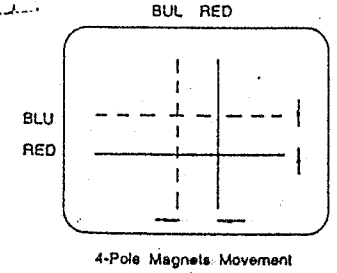
(a) Loosen the clamping screws of deflection yoke to allow the yoke to tilt.
(b) Place a wedge as shown in Figure 14 temporarily. (Do not remove cover paper on adhesive part of the wedge).
(c) Tilt front of the deflection yoke up or down to obtain better convergence in circumference. (See Fig.23) Push the mounted wedge into the space between picture tube and the yoke to hold the yoke temporarily.
(d) Place other wedge into bottom space and remove the cover part to stick.
( ) Tilt front of the yoke right or left to obtain better convergence in circumference. (See Fig.23).
(f) Hold the yoke position and put another wedge in either upper space, remove cover paper and stick the wedge on picture tube to hold the yoke.
(g) Detach the temporarily mounted wedge and put it in another upper space. Stick it on picture tube to fix the yoke.
(h) After placing three wedges, recheck over all convergence. Tighten the screw firmly to hold the yoke tightly in place.
(i) Stick 3 grass cloth tapes on wedges as shown in Figure 21.



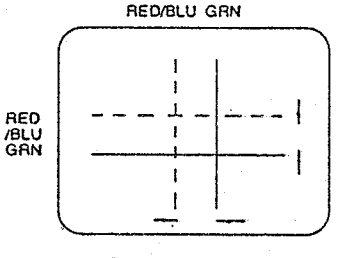
CONVERGENCE MAGNET ASSEMBLY



ADJUSTMENT OF MAGNETS

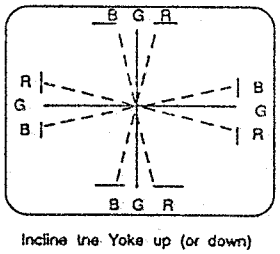


4-Pole Magnets Movement

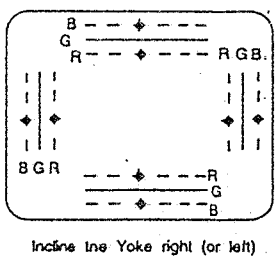


6-Pole Magnets movement

Center Convergence by Convergence Magnets



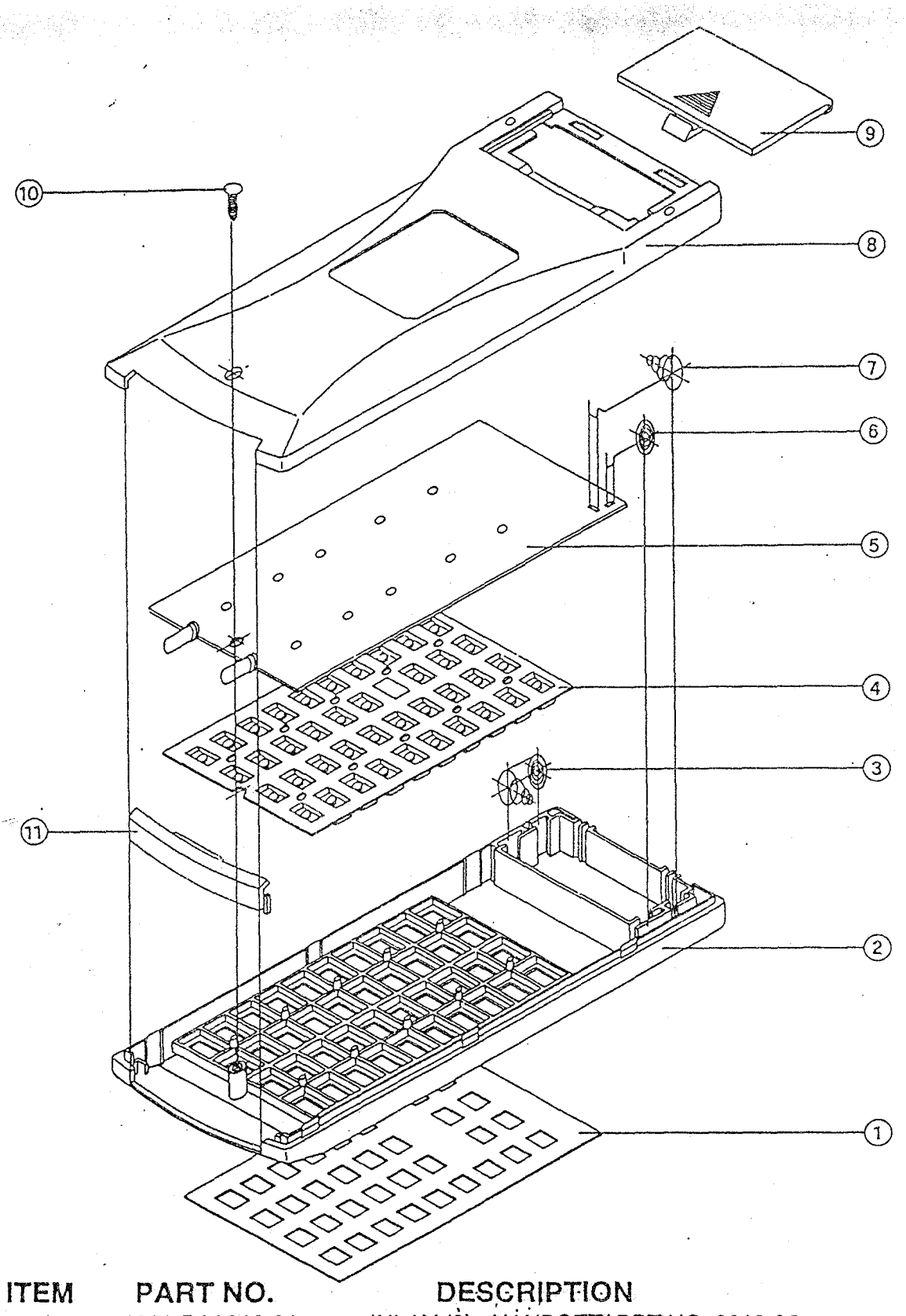
Incline the Yoke up (or down)



Incline the Yoke right (or left)

Circumference Convergence by DEF Yoke

FIG. 23 Dot Movement Pattern



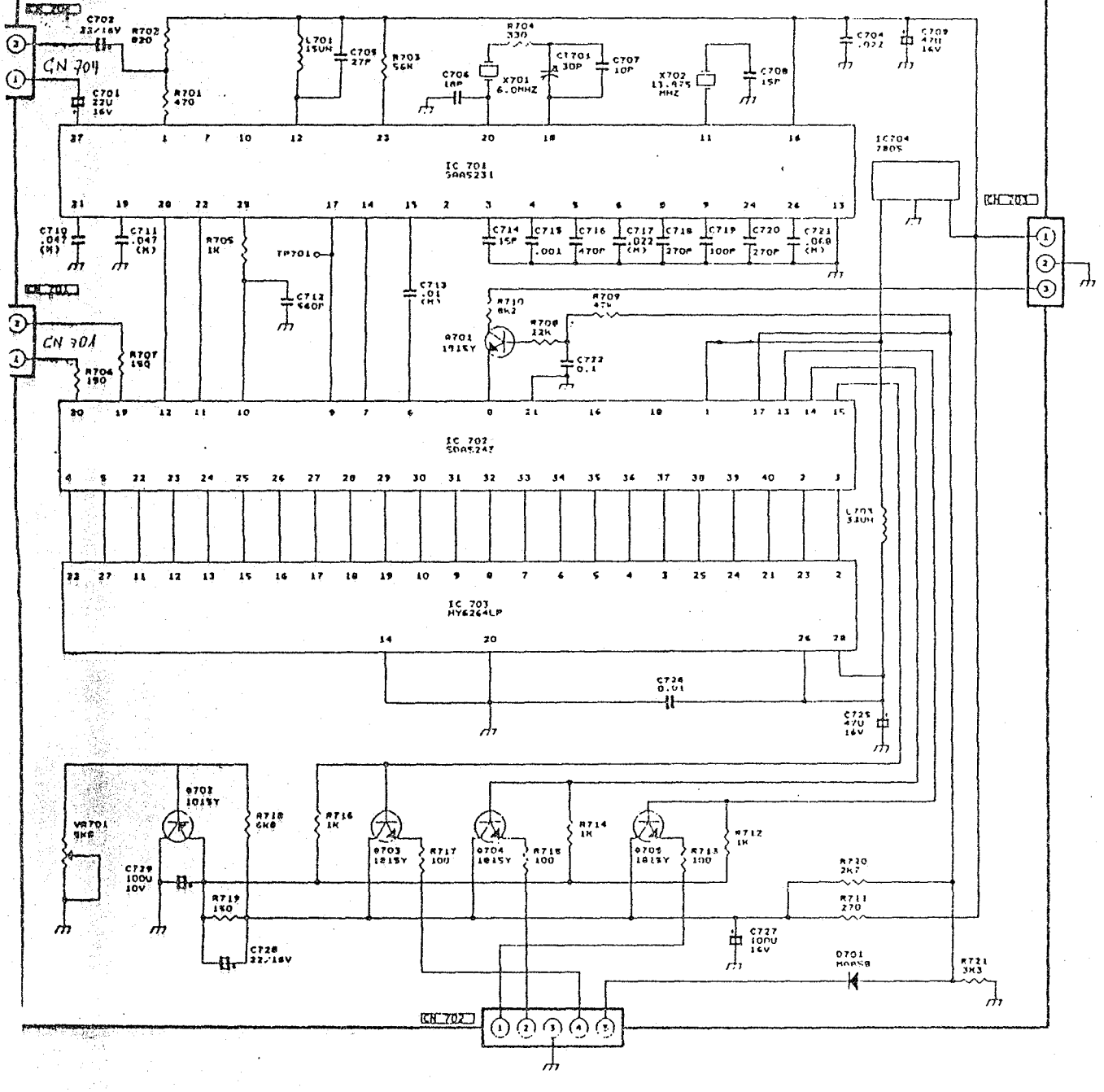
ITEM	PART NO.	DESCRIPTION
1	1201-BA0010-01	INLAY (8) - HANDSET/ PRT NO: 8218-05
2	1001-EA0013-00	TOP CABINET - BLACK MOULDED
3	1501-AA0006-00	BATTERY CONTACT "+" & "-"
4	1101-CA0001-00	RUBBER CONTACT - W/KEY KNOB
5	53H3-B8218F-01	P.C.B. HANDSET 116.5X50X1.6MM
6	1501-AA0005-00	BATTERY CONTACT "+"
7	1501-AA0006-00	BATTERY CONTACT "-"
8	1001-EA0014-00	BOTTOM CABIENT - BLACK MOULDED
9	1001-CA0015-00	BATTERY DOOR - BLACK MOULDED
10	26PP-T2601B-08	62.6 X 8 P/PA FOR TOP/BOTTOM CAB. (BLACK)
11	1001-BA0016-00	INFARAED LENS - DARK RED

Geräte - Ersatzteilliste (ETQSTL) Datum : 22.06.93 Seite : 1

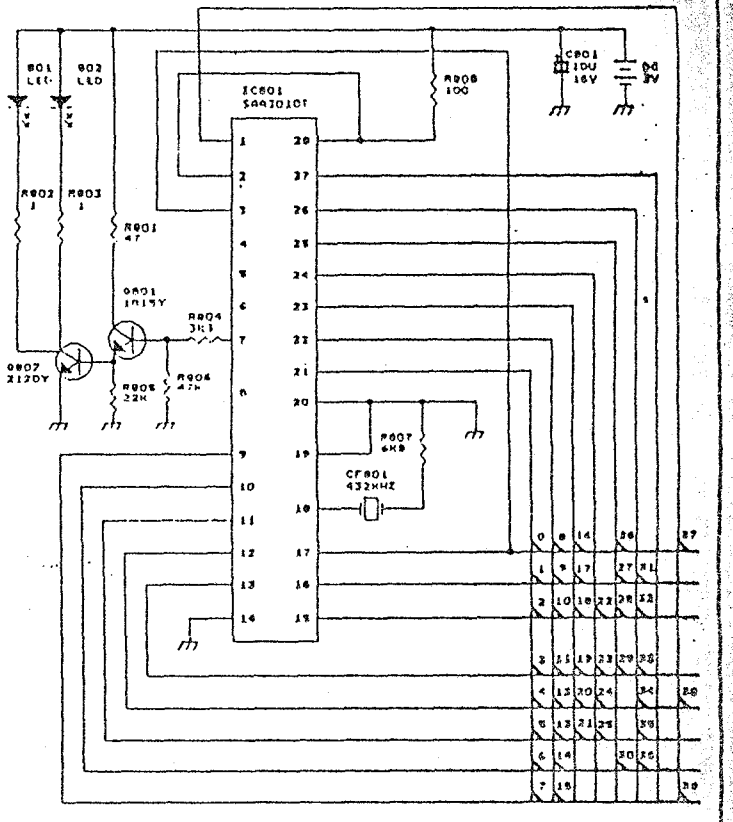
Gerätetyp : 258 CTV 258 VT CTC-CLATRONIC 55cm COLOR MULTISYSTEM

ET-Nr.	Bezeichnung			Location	Anz.
824401	FERNBEDIENUNG CTV 258				1
824405	TUNER TERE1-0J3A CTV 258		** ODER **		1
823005	TUNER UVE 33-W21=TERE01	CTV 258	** ERSATZTYP **		1
824406	NETZSCHALTER CTV 258				1
818815	VERZÖGERUNGSLEITUNG-Y	CTV 258	DL 201 R 22E409	DL 201	1
815920	VERZÖGERUNGSLEITUNG-PAL	CTV 258	DL 202	DL 202	1
824408	FILTER OFW K-2950 M	CTV 258	SAW 101	SAW 101	1
825802	FILTER OFW F328EM	CTV 258	SAW102	SAW 102	1
824428	FILTER 190 404	CTV 258	L 101	L 101	1
824429	FILTER 193 191	CTV 258	L 102	L 102	1
824424	FILTER 190 55A	CTV 258	L 104 + 114	L 104	2
824425	FILTER 203 89A	CTV 258	L 106	L 106	1
825803	FILTER 210 380 AFC	CTV 258	L 107	L 107	1
824427	FILTER 220 55A	CTV 258	L 112	L 112	1
824424	FILTER 190 55A	CTV 258	L 104 + 114	L 114	2
752133	IC PCA 84C641 = CTV 322 S	CTV 258	IC 001	IC 001	1
752802	IC 24 C 01 B6 EEPROM	CTV 258	IC 002	IC 002	1
751728	IC LA 7910	CTV 258	IC 003	IC 003	1
752328	IC TDA 2549	CTV 258	IC 101	IC 101	1
752335	IC TDA 2460-2	CTV 258	IC 102	IC 102	1
752240	IC TA 8759 BN	CTV 258	IC 201	IC 201	1
750001	Z-IC 7812 +12V	CTV 258	IC 202	IC 202	1
751706	IC LA 7830	CTV 258	IC 301	IC 301	1
752330	IC TDA 1904	CTV 258	IC 401	IC 401	1
825801	TREIBERTRAFO HOR. CTV 258			T 301	1
824404	Z T R CF 0467 CTV 258			T 302	1
824420	NETZFILTER CTV 258			T 601	1
822406	NETZFILTER LS-13107 LSE	CTV 258		T 602	1
824403	TRENNTRAFO TL 3913-47	CTV 258	== S06110V	T 603	1
825809	KNOPF FÜR NETZSCHALTER	CTV 258			1
824412	FEDER FÜR NETZSCH.KNOPF	CTV 258			1
825808	FRONTBLENDE ROT CTV 258				1
825805	BEDIENTEILKLAPPE CTV 258	CHARCOAL GREY			1
825807	BEDIENTEILKLAPPE CTV 258	STONE FINISH			1
825810	HALTER FÜR RÜCKWAND	CTV 258			1
825804	GEHÄUSE CHARCOAL GREY	CTV 258			1
825806	GEHÄUSE STONE FINISH	CTV 258			1
700512	BILDRÖHRE A 51 JAR-90X10	CTV 258			1
825811	ADAPTER ZW. NETZSCHALTER	UND KNOPF	CTV 258		1
824417	RÜCKWAND CTV 258				1
820410	LAUTSPRECHER 4"-8 OHM-3W	CTV 258			1
824419	GEHÄUSE FÜR LAUTSPRECHER	CTV 258			2

TELETEXT P.C.BOARD



HANDSET P.C.BOARD



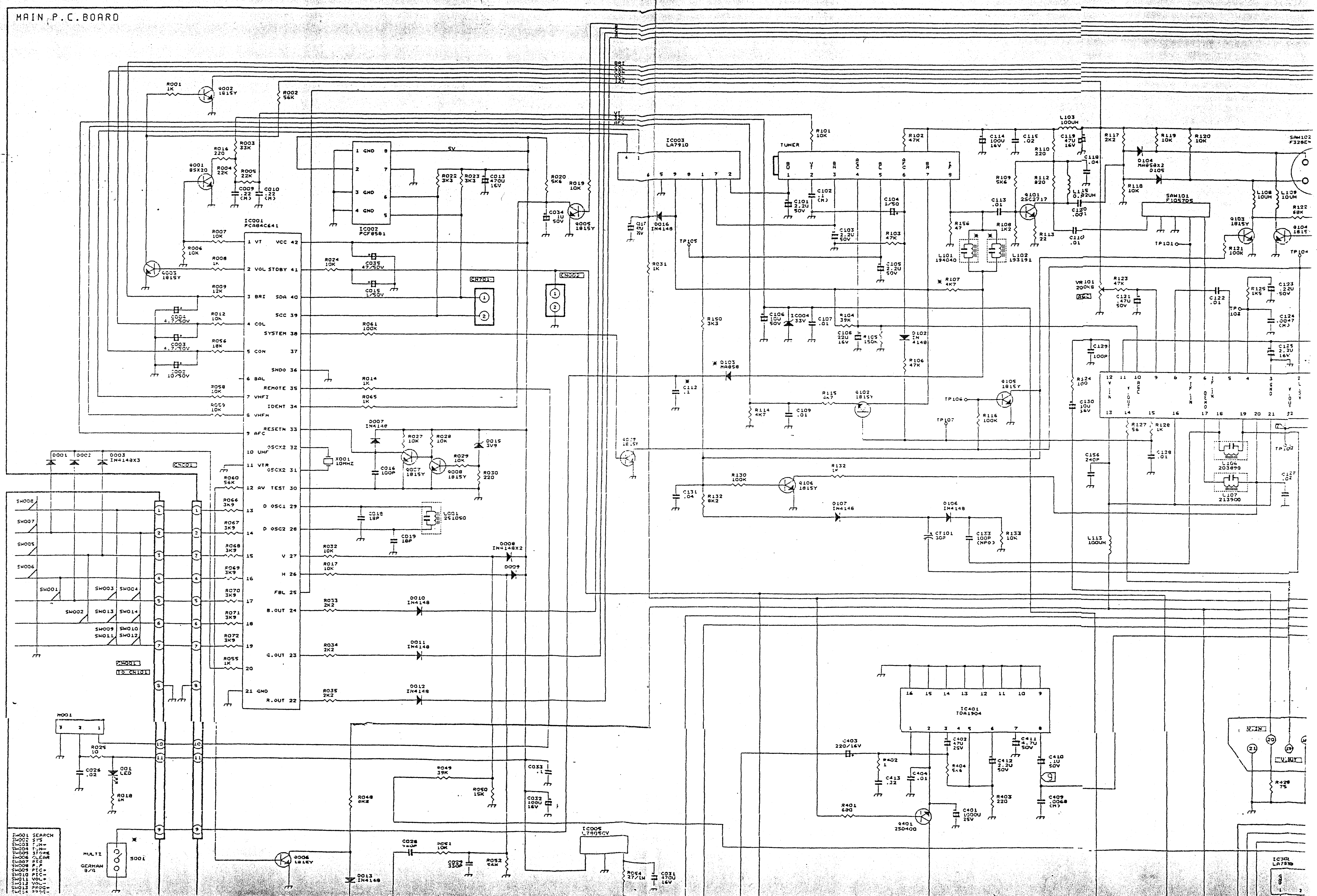
0	10	PAGE+ —/—	26	PROG+	
1	11	PAGE−	27	PROG−	
2	12	STANDBY	28	R.V	
3	13	MUTE	29	V1/VHO	
4	14	P.IN	30	SLEEP	
5	15	RECALL	31	HOLD	
6	16	VOL+	32	SUB PAGE	
7	17	VOL−	33	LARGE	
8	18	DPI+	34	REVEAL	
9	19	DPI−	35	CANCELL	
	20	COL+	36	MIX	
	21	COL−	37	AV	
	22	BAL−R	38	TEXT	
	23	FGL−L	39	TV	
	24	CON+			
	25	CON−			

SKYWORTH INDUSTRIES LTD

Title: SCHEMATIC DIAGRAM

Size: C | Document No: | Rev: | 1.023

Date: | Sheet: | of


MAIN P.C.BOARD
IC001 PCA84C641
1 VT
VCC 42
2 VOL
STDBY 41
3 BRI
SDA 40
SCC 39
4 COL
SYSTEM 38
5 CON
37
SNDO 36
6 BAL
REMOTE 35
7 VHFI
IDENT 34
8 VHFH
RESETN 33
9 AFC
OSCX2 32
10 UHF
11 VTR
OSCX2 31
12 AV
TEST 30
D OSC1 29
13
D OSC2 28
14
15
V 27
16
H 26
FBL 25
17
B.OUT 24
18
19
G.OUT 23
20
21 GND
R.OUT 22
IC002 PCF8581
1 GND
2
3 GND
4 GND
8
7
6
5
5V
IC003 LA7910
TUNER
IC004 33V
IC005 L7805CV
IC401 TDA1904
SAW101 F1057DS
SAW102 F3286N
Q001 8SX20
Q002 1815Y
Q003 1815Y
Q005 1815Y
Q006 1815Y
Q007 1815Y
Q008 1815Y
Q101 2SC2717
Q102 1815Y
Q103 1815Y
Q104 1815Y
Q105 1815Y
Q106 1815Y
Q401 2SD400
X001 10MHZ
L001 251050
L101 194040
L102 193191
L103 100UH
L106 203890
L107 213900
L108 10UH
L109 10UH
L113 100UH
L115 0.82UH
VR101 200KB
D001
D002
D003 IN4148X3
D007 IN4148
D008 IN4148X2
D009
D010 IN4148
D011 IN4148
D012 IN4148
D013 IN4148
D015 3V9
D016 IN4148
D102 IN 4148
D103 MA858
D104 MA858x2
D105
D106 IN4148
D107 IN4146
001 LED
CN701
CN002
CN001
TO CN101
M001
S001
MULTI
GERMAN B/G
TP101
TP102
TP103
TP104
TP105
TP106
TP107
BRI
COL
CON
VOL
12V
VT
32V
AFC
SW001 SEARCH
SW002 SYS
SW003 TUN+
SW004 TUN-
SW005 STORE
SW006 CLEAR
SW007 PSC
SW008 P.P
SW009 PIC+
SW010 PIC-
SW011 VOL+
SW012 VOL-
SW013 PROG+
IC301 LA7830

CONTROL P.C.BOARD

SW001 SEARCH
SW002 STO-
SW003 CH+
SW004 CH-
SW005 STORE
SW006 CLEAR
SW007 PRO
SW008 P.P
SW009 PIC+
SW010 PIC-
SW011 VOL+
SW012 VOL-
SW013 PROG+
SW014 PROG-

SW001 SW003 SW004
SW002 SW013 SW014
SW009 SW010
SW011 SW012

TO CH101

M001

R025 10
C026 .02
D01 LED
R018 1K

MULTI GERMAN B/G

S001

R070 3K9
R071 3K9
R072 3K9
R055 1K

H 26
FBL 25
B.OUT 24
G.OUT 23
R.OUT 22
21 GND

R033 2K2
R034 2K2
R035 2K2

D010 IN4148
D011 IN4148
D012 IN4148

R049 39K
R050 15K
C033 .1
C032 1000U 16V
R048 6M2
C028 .47
R051 10K
C023 330P
R052 62K
Q006 181EY
D013 IN4148

IC005 L7805CV
R054 27/1W
C031 470U 16V

IC401 TDA1904
C403 220/16V
C402 47U 25V
C411 4.7U 50V
C410 4.7U 50V
C412 2.2U 50V
C409 .0068 (M)
R402 1
C413 .22
C404 .01
R404 5K6
R403 220
R401 680
Q401 2SD400
C401 1000U 25V

C618 .1000U 25V
R625 10K 2W
R629 56K

R616 130K 1W
R627 12/2W (NO)
R624 0.68/1W
D607 BYT52J
D608 BYT52J
L605 91UH
L606 91UH
C615 .0022 1KV
C621 .0022 1KV
C616 1000U 16DV
C619 680P 500V
C617 1000U 25V
C622 4700U 25V
Q635 2SC2335
R626 6.8/2W (NO)
R620 2K7
Q606 181EY
R621 1.5K 1/2W
Q607 2SC2230
R622 10K
Q608 181EY
C620 10 50V
R623 56K

T603

C606 .0047 500V
D601 BA10G
C607 1000U 400V
R604 330
C608 .033(M)
C604 .0047 500V
C605 .0047 500V
C603 .22 250V
R602 4/5W (NI)
R428 2.2CC 1/2W
SW601
R605 6K8
R607 1K8
R608 9K2
VR001 1K
Q601 181EY
R609 10K
R610 .849
D603 9V1
R603 2.2 2W
R606 1K
D602 8V2
Q602 2SB774
R612 12/1W (NO)
C609 47U 50V
D604 BYT52J/X3
D605
D606
C610 47/25
C611 .1(M)
Q604 2SD1545
R611 4K7
R613 27/2W (NO)
R614 .2/2W (NI)
R615 39/5W (NI)
R617 8M2 1W
C613 .0022/400V

AC LINE FILTER P.C.BOARD
T602 LS-13107
C602 .47/250V
CN601
T601 TL24
F601 T3.15A 250V
C601 .47 250V
R601 P.T.C
VDE
CN602
L601

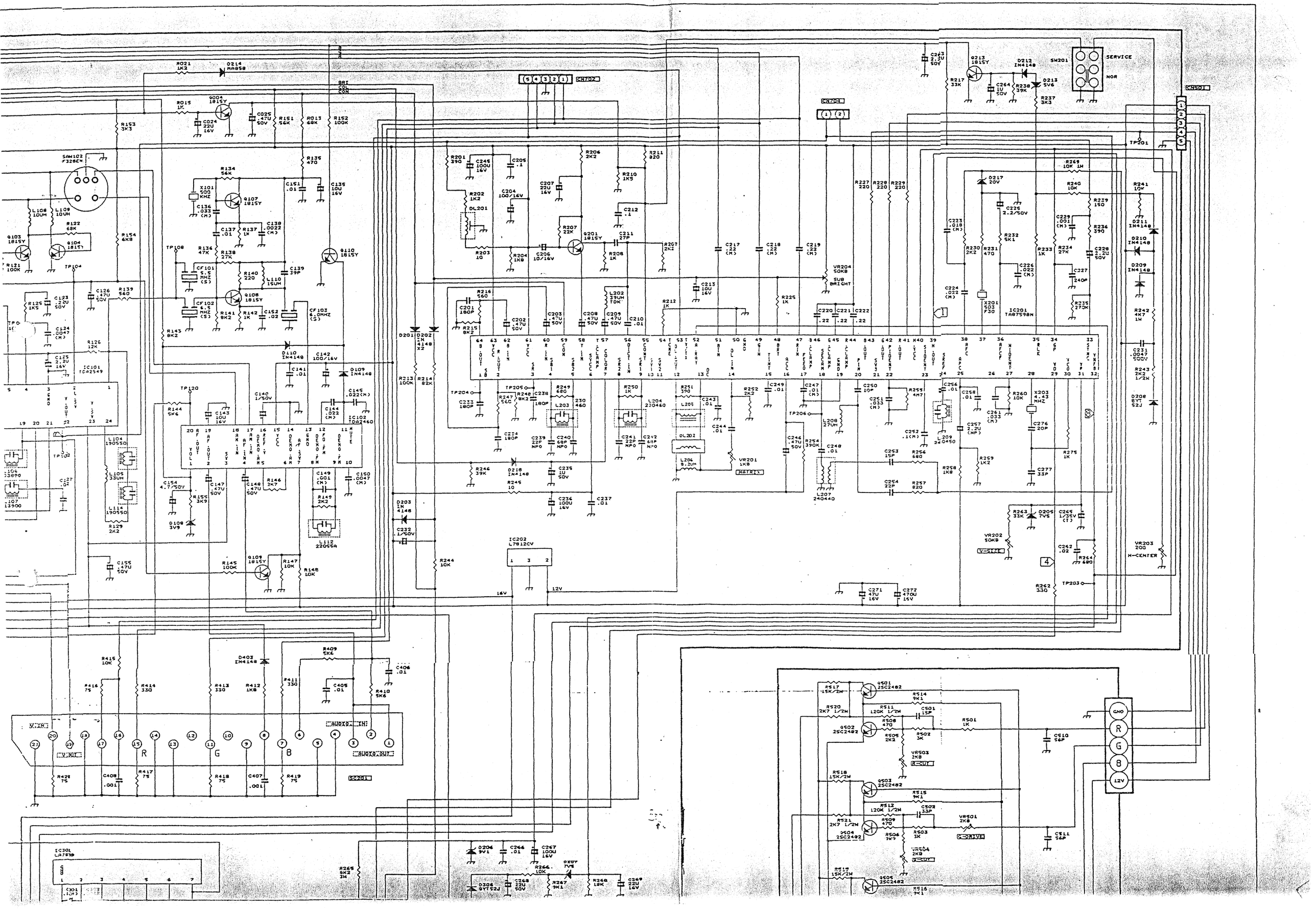
8 OHM/3W
CN451

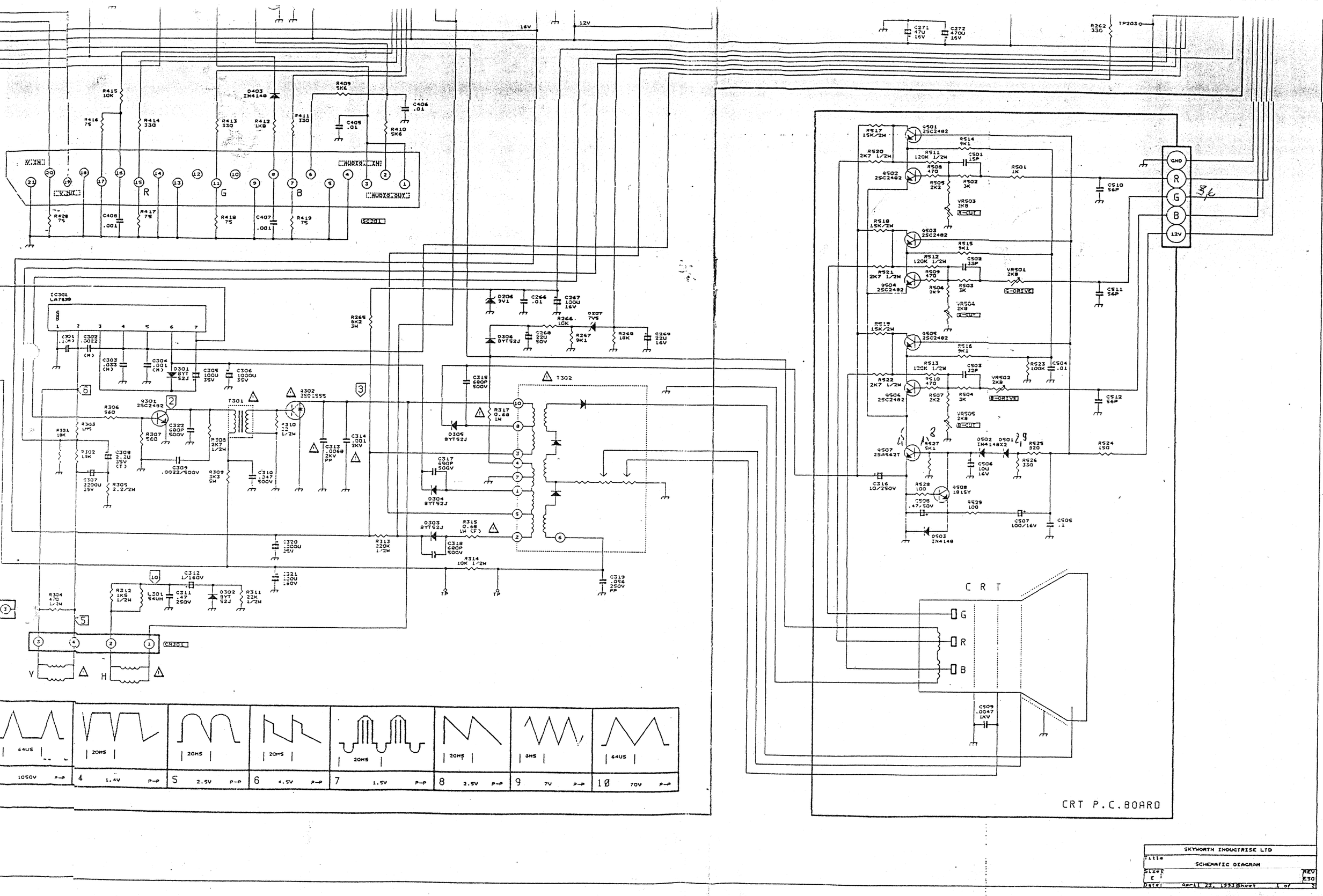
SERVICE PRECAUTION: THE AREA ENCLOSED BY THIS LINE (——) IS DIRECTLY CONNECTED WITH AC MAIN VOLTAGE. WHEN SERVICING THIS AREA, CONNECT ISOLATING TRANSFORMER BETWEEN TV RECEIVER AND AC LINE TO ELIMINATE HAZARD OF ELECTRIC SHOCK.

REMAKS: FOR (FTZ) TV USE WITH "*" MAKE.

IC301 LA7830
R429 75
R301 10K
R304 470 1/2W
CN703

	64US	64US	64US	
1	3V P-P	2 120V P-P	3 1050V P-P	4


CN702
CN703
CN501
SERVICE
NOR
SW201
SAW102 F328EW
IC101 TDA2549
IC102 TDA2460
IC201 TA8759BN
IC202 L7812CV
IC301 LA7830
SC201
MATRIX
V-SIZE
V-LIN
H-CENTER
R-CUT
G-CUT
B-CUT
R-DRIVE
G-DRIVE
B-DRIVE
GND
R
G
B
12V
16V



Title	SKYWORTH INDUCTRISK LTD
	SCHEMATIC DIAGRAM
Size: E	REV E30
Date: April 22, 1993	Sheet 1 of 2